



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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November 29, 1999

Mr. James E. Rasmussen
United States Department of Energy
Environmental Assurance, Permits, and Policy Division
P.O. Box 550, MSIN: A5-15
Richland, Washington 99352

Mr. William D. Adair, Director of Environmental Protection
Fluor Daniel Hanford, Inc.
2420 Stevens Center, MSIN: H6-21
Richland, Washington 99352



Dear Messrs. Rasmussen and Adair:

The Washington State Department of Ecology (Ecology) has reviewed the Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex, DOE/RL-91-27, WD-1, Chapters 8, 11, and 12. The areas of deficiency are itemized on the attached table. Please provide a written response to Ecology's comments within sixty (60) days of receipt of this correspondence. After Ecology receives the United States Department of Energy (USDOE) responses, comment resolution meetings will be scheduled.

Ecology is currently reviewing the Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex, DOE/RL-91-27, WD-1, Chapter 4. The notice of deficiency for Chapter 4 will be transmitted within two (2) weeks.

I look forward to working with your staff on the completion of this permitting effort. If you have any questions or would like to schedule a meeting regarding the information in this letter, please contact me at (509) 736-3003.

Sincerely,

Brenda L. Becker-Khaleel

Brenda L. Becker-Khaleel
Nuclear Waste Program

BB:ld

cc: Joel Williams, WMH Donna Powauke, NPT J. R. Wilkinson, CTUIR
John Winterhalder, WHM Russell Jim, YIN Mary Lou Blazek, OOE
Administrative Record: 222-S Laboratory

**Notice of Deficiency Comments
222-S Part B Permit Application
November 17, 1999**

<u>Comment #</u>	<u>Comment</u>	<u>Closed on</u>
Chapter 8		
1.	Add sections to address the training requirements specified in WAC 173-303-330(1)(a) and (c); and WAC 173-303-330(3).	
2.	Page 8-1, line 9 – Insert "training" between "contains requirements."	
3.	Page 8-1, lines 22 and 23 – Specify the emergency response actions that will be included in the emergency response training. Stating that the training is consistent with Chapter 7.0 does not provide an adequate level of detail for the dangerous waste permit application.	
4.	Page 8-1, line 27 – Provide additional description and an outline for the TSD unit-specific training provided to Hanford Facility personnel.	
5.	Page 8-1, lines 30 through 34 – Specify the training, the Emergency Coordinator (Building Emergency Directors) and their alternates, receive for this job task. Provide an outline of the training.	
6.	Page 8-1, lines 38-40 – Provide an outline of the TSD unit-specific training provided as an annual review of emergency response training and an outline of the training necessary to ensure TSD unit operations are in compliance with WAC 173-303.	
7.	Page 8-1, lines 44 and 45 – The first reference to the Washington Administrative Code (WAC) should be WAC 173-303, and the second reference to the WAC should be WAC-173-303-330.	
8.	Page 8-2, lines 3 through 7 – Insert the following bullets <ul style="list-style-type: none"> ◆ Procedures for safely managing waste (including: accumulation area inspections, record keeping documenting repair or resolution to inspection items requiring actions, labeling, and incompatible waste management). ◆ Response to chemical spills/releases ◆ Key parameters for automatic waste feed cut off systems 	

9.	Page 8-2, lines 18 through 20 – Modify line 18 to read "Written training plan documentation may be maintained as a separate document and attached to the permit application as an appendix, it is a part of the <i>Hanford Facility Dangerous Waste Part B Permit Application</i> and the HF RCRA Permit, and will be an enforceable part of the Permit. Delete the last sentence.	
10.	Page 8-2, line 18 – The written training plan documentation is maintained outside the Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex, however, a copy of the documentation will be maintained at the 222-S Laboratory Building. Please modify text to indicate the plan location.	
11.	Page 8-2, line 22 – Specify the title of the training plan documentation.	
12.	Page 8-2, line 23 – Change the word "could" to "may."	
13.	Page 8-2, line 24 – Correct the reference to the HF RCRA Permit (DW Portion), Condition to II.C.1.	
14.	Page 8-2, line 24 – Change the word "could" to "may."	
15.	Page 8-2, lines 25 and 26 – Specify the title(s) of the document constituting the written training plan. Specify the title of the core document.	
16.	Page 8-2, line 34 – Specify the title of the core DWTP document.	
17.	Page 8-2, lines 39 and 40 – Specify where in the 222-S Laboratory Building the names of facility personnel/responsibilities will be maintained.	
18.	Page 8-2, line 39 – remove the word "activities" and insert "job duties." Add text to indicate the job duties are cross-referenced to job descriptions, and add the name of the employee filling the position.	
19.	Page 8-2, lines 40 and 41 – Change the word "could" to "may" and specify the title of the DWTP core document.	
20.	Page 8-2, line 42 – Change the sentence to read "A list of Hanford Facility personnel assigned to the 222-S Laboratory Complex is maintained, and will be available at the time of request."	
21.	Page 8-2, line 44 – Clarify this statement to reflect that the prerequisite skills, education, and other qualification requirements will be provided for each specific job title.	
22.	Page 8-2, line 46 – Change the sentence to read "Specific information concerning individuals , job title, requisite skills....."	

23.	Page 8-3, lines 1 through 3 – Please clarify this information. Why are the training requirements for Hanford Facility personnel and non-facility personnel performing duties and responsibilities not related to the 222-S Laboratory Complex identified in the DWTP documentation?	
24.	Page 8-3, lines 8 through 10 – Specify the title of the DWTP documentation. Delete the last sentence, the “type” and “amount” of training must be added to the text.	
Chapter 11.0		
25.	General Comment – Chapter 11 needs to be rewritten to WAC 173-303-610(1) and 610(2); specifically address the applicable regulatory requirements provided in WAC 173-303-610 and –620(3) and (5). Ecology anticipates the submission of a draft Sampling and Analysis Plan (SAP) with this closure plan. The SAP will be reviewed prior to closure and will be approved by Ecology prior to implementation.	
26.	Page 11-1, lines 11 and 12 – Modify text to “Any portion of the unit unable to be clean closed will be placed in a stable state, protective of human health and the environment closed in compliance with WAC 173-303-610(b).”	
27.	Page 11-1, lines 14 and 15 – Provide specific descriptions of “contamination resulting from activities not associated with management of regulated waste in these waste management units.” Be prepared to provide data or records to prove “contamination” was not associated with the waste management units. In addition, identify specific remedial actions which are indicated or planned.	
28.	Page 11-1, lines 30 and 31 – Propose constituents of concern based on Part A and Tank 103 RCRA sampling. Revision of this list will be required prior to closure to identify constituents which were omitted, or are newly regulated. List the numeric clean closure levels for each constituent of concern using MTCA Method B and LDR treatment technologies.	
29.	Page 11-1, lines 40 through 42 – Specify an extraction technology. List decontamination methods provided in 40 CFR 268.45 Treatment Standards for Hazardous Debris.	
30.	Page 11-1, line 44 – If cracks are sealed before decontamination, they will need to be “unsealed” for bias sampling. Address how this will be accomplished.	
31.	Page 11-2, lines 5 through 9 – Either remove the quotation marks from the text or copy it verbatim from the Code of Federal Regulations.	

32.	Page 11-2, line 12 – Delete the word “be” and replace with the word “provide” before “verification.”	
33.	Page 11-2, line 13 – Delete “health-based levels” and replace with “40 CFR 268.40 Treatment Standards for Hazardous Waste.”	
34.	Page 11-2, line 14 – Include cracking as an area for re-evaluation.	
35.	Page 11-2, line 15 – Delete “re-evaluated” and replace with “sampled and analyzed.”	
36.	Page 11-2, line 20 – Tank 103 was rinsed and isolated, it was not closed. Provide RCRA data to verify compliance with performance standards. If tank 103 does not meet the performance standard criteria, it will need to be cleaned at the time of closure.	
37.	Page 11-2, line 22.– Delete “health-based limits” and replace with “40 CFR 268.40 Treatment Standards for Hazardous Waste.”	
38.	Page 11-2, lines 23 and 24 – Address what will happen if the tanks do not meet the performance standards, state that the tanks will be removed and that they will be designated and disposed at an appropriate waste management unit or TSD.	
39.	Page 11-2, line 30 – Delete “health-based limits” and replace with 40 CFR 268.40 Treatment Standards for Hazardous Waste.” Include a provision for proper management of rinsate from all components, tanks, piping, equipment, etc.	
40.	Page 11-2, line 31 – Address what actions will be taken if the rinsate does not meet the performance standards.	
41.	Page 11-2, section 11.2.4 – Specifically address closure standards for the piping stored in the T-8 tunnel.	
42.	Page 11-2, lines 36 and 37 – Discuss how ancillary equipment will be cleaned and where it will be disposed.	
43.	Page 11-2, line 45 – Delete the reference to the Hanford Facility RCRA Permit (Condition II.K.1.) and state the actual standard – WAC 173-303-610(2)(b) as amended.	
44.	Page 11-2, line 46 – Propose sample locations (i.e., concrete penetrations, cracks, lowest point, etc.), and sampling methods. Theses will be further defined at the time of closure in an Ecology approved SAP.	

45.	Page 11-3, line 2 – The review of operating records will not be adequate for the 222-S Laboratory Complex. The facility has been in operation since the 1950s and RCRA was not promulgated until 1980. Ecology does not anticipate that operating records pertaining to spills of dangerous waste prior to the applicability of RCRA at this unit will adequately delineate contamination in underlying soils in relation to when the spills occurred. Propose additional documentation that would provide an indication of the condition of the underlying soil.	
46.	Page 11-3, lines 3 through 7 – Only part of Room 2-B is above a tunnel, discuss how the remaining portion of the room will be checked for potential releases. Discuss what actions will be taken if staining is found on the ceiling of the tunnel.	
47.	Page 11-3, line 13 – Delete “to address required post-closure activities” and replace with “to comply with WAC 173-303-610 and 620(3) and (5) requirements.”	
48.	Page 11-3, line 15 – Clarify that all process equipment and structural components will be decontaminated prior to removal, or add an additional discussion of disposal options.	
49.	Page 11-3, line 19 – According to WAC 173-303-610(5), identify the cleanup performance standards for decontaminating equipment or materials used during closure activities.	
50.	Page 11-3, line 29 – Reiterate the maximum extent of operation for each waste management unit. In addition, add ancillary systems listed in WIDS.	
51.	Page 11-3, line 36 – Change the sentence to “During unit closure this piping will be designated and disposed in an appropriate waste management unit or TSD.	
52.	Page 11-3, line 44 – Please add the clarification that Appendix 11A contains “information for the previously closed and removed storage structures.”	
53.	Page 11-4, section 11.3.2 – Provide the current spill history, this section can be updated with permit modifications as needed and at the time of closure.	
54.	Page 11-4, line 12 – Add WIDS to the list of records which will be reviewed.	
55.	Page 11-4, line 30 – Delete the reference to the Hanford Facility RCRA Permit, Condition II.K.1, and replace with the actual regulatory requirement – WAC 173-303-610(2)(b).	
56.	Page 11-4, line 31 – State where the contaminated soil will be disposed, or that the contaminated soil will be designated and disposed at an appropriate waste management unit or TSD.	

57.	Page 11-5, line 5 – Provide a list of constituents of concern. This list will be revised prior to closure activities to ensure inclusiveness.	
58.	Page 11-5, lines 5 and 6 – Triple rinsing does not verify the tanks are clean. Describe how the inner surface of each tank will be inspected to verify a clean debris surface.	
59.	Page 11-5, line 6 – Specify decontamination solutions and rinsates will be designated per WAC 173-303 for disposal.	
60.	Page 11-5, lines 6 and 7 – Delete the last sentence of the paragraph. Provide data proving Tank 103 meets the performance standards, if Tank 103 does not meet performance standards, address how the tank will be cleaned.	
61.	Page 11-5, lines 5 and 6 – Discuss what actions will be taken if the tanks and decontamination solutions do not meet the performance standards.	
62.	Page 11-5, lines 21 through 25 – Suggest moving this paragraph up on the page and inserting it between lines 7 and 9.	
63.	Page 11-5, lines 12 and 13 – Specify how the piping will be cleaned, to what performance standards, and where will it be disposed.	
64.	Page 11-5, lines 18 and 19 – Propose methods for the removal of each piece of equipment, the proposal can be fine tuned at the time of closure.	
65.	Page 11-5, lines 28 through 33 - Address how each type of piping will be cleaned and disposed.	
66.	Page 11-5, line 38 – The concrete trench is not adequately discussed in the referenced section 11.3.3.6.3. Add a discussion of how the concrete trench will be decontaminated, the sampling and analysis which will occur in the concrete trench, and where it will be disposed.	
67.	Page 11-5, line 43 – Delete “would have” and provide data verifying the concrete was clean prior to liner installation. Also, provide documentation that closure performance standards for concrete were met.	
68.	Page 11-5, lines 43 through 45 – Delete the last sentence of this paragraph. Include a description of the performance standards applicable to concrete. In addition, identify that if there is any indication of contamination migration (i.e., cracks) sampling of the underlying soils will be performed in accordance with an Ecology approved SAP. Include the performance standards for soil.	
69.	Page 11-6, line 1 – Describe how the liner will be removed to allow the identification, sampling, and analysis of cracks in the underlying concrete.	

70.	Page 11-6, line 15 – Propose a SAP, it can be revised and approved by Ecology at the time of closure.	
71.	Page 11-6, line 18 – Delete the reference to the Hanford Facility RCRA Permit (Condition II.K.), replace with regulatory citation – WAC 173-303-610(2)(b).	
72.	Page 11-6, line 26 – Provide a statistical method for calculating the number of samples that will be collected, this proposed method can be revised prior to closure in the Ecology approved SAP.	
73.	Page 11-6, line 30 – Provide criteria for evaluating “feasible.”	
74.	Page 11-6, lines 31 and 32 – State which operable unit the 222-S Laboratory Complex is included in, and provide the anticipated date for cleanup of that operable unit.	
75.	Page 11-6, line 31 – Change the words “deferred to” to “coordinated with.” Ecology will coordinate cleanup of TSD units with CERCLA corrective action, as required by the TPA.	
76.	Page 11-6, lines 40 and 41 – State explicitly that the concrete will be cored and samples of underlying soil will be collected for analysis of constituents of concern.	
77.	Page 11-6, section 11.3.3.6.2 – Address how soil samples will be collected, and where they will be collected.	
78.	Page 11-7, line 8 – Concrete joints as areas that potentially may have high contamination; identify how this will be taken into consideration for biased sampling and will be addressed in the SAP.	
79.	Page 11-7, line 9 – Clarify that the soil will be analyzed for constituents of concern. Address removal and disposal of contaminated soil.	
80.	Page 11-7, lines 12 and 13 – Propose “sufficient quality assurance and quality control methods” which will be included in the Ecology approved SAP.	
81.	Page 11-7, line 17 – Include co-located duplicates and field splits as additional QA checks.	
82.	Page 11-7, line 19 – Clarify “standard methods” by using specific protocols, i.e., SW-846.	
83.	Page 11-7, line 31 – Clarify that the off-site facility will be a “TSD” facility.	
84.	Page 11-7, line 39 – Include a review of facility records for identification of any and all spills. Include a review of Occurrence Reports for identification of spills or releases.	

85.	Page 11-7, lines 40 through 45 – Propose decontamination methods, if you will be using a clean debris surface, specify 40 CFR 268.45 methods. Clarify why the structure would be removed prior to decontamination.	
86.	Page 11-8, line 2 through 9 – Clarify this section, the sequence of steps is not clear. The concrete should be decontaminated using a 40 CFR 268.45 method if it will be considered a clean debris surface, propose a method from 40 CFR 268.45. Specify additional sampling that will be conducted on cracks or stained areas.	
87.	Page 11-8, line 12 – Include a review of all facility records for any and all spills near the 222-S Dangerous and Mixed Waste Storage Area.	
88.	Page 11-8, line 16 – Propose a sampling strategy, including constituents of concern and analytical methods.	
89.	Page 11-8, line 21 – Prepare a draft SAP for submittal with this closure plan. The draft SAP will be amended prior to closure, and will be approved by Ecology prior to implementation.	
90.	Page 11-8, lines 24 and 25 – Delete the reference to the Hanford Facility RCRA Permit (Condition II.K.) and use the regulatory citation – WAC 173-303-610(2)(b).	
91.	Page 11-8, lines 33 and 34 – Propose a statistical method for calculating the number of samples to be collected.	
92.	Page 11-8, line 40 – Address the removal of all waste from room 2-B.	
93.	Page 11-8, line 40 – Include a review of Operating records to assess any and all spills that have occurred.	
94.	Page 11-8, lines 41 and 42 – Removal of portions of the floor prior to decontamination may not be appropriate for room 2-B, revise this sentence.	
95.	Page 11-8, lines 42 through 44 – Propose methods for decontamination, if the concrete will be considered a clean debris surface, propose methods specified in 40 CFR 268.45.	
96.	Page 11-8, lines 40 through 44 – Address removal of the equipment from room 2-B.	
97.	Page 11-9, lines 2 through 5 – Address the portion of the floor which is not above a tunnel, and address what actions will be taken if staining is found on the ceiling of the tunnel.	
98.	Page 11-9, lines 9 and 10 – Reiterate the maximum inventories for the waste management units.	
99.	Page 11-9, lines 14 through 19 – Propose a generic closure schedule.	

100.	Page 11-9 – Insert new section addressing closure activities documentation (i.e., closure logbook).	
Chapter 12.0		
101.	Page 12-1, line 2 – Change “could” to “are.”	
102.	Page 12-1, lines 5, 6, 18, and 27– Insert “Laboratory Complex” after 222-S.	
103.	Page 12-1, line 5 – Insert “the” to read “...applicable to the 222-S.....”	
104.	Page 12-1, line 8 – Delete text within parentheses, change to “as specified in Condition II.A and II.I.1.e of the HF RCRA Permit (DW Portion).”	
105.	<p>Page 12-1, bulleted list – insert the following bullets</p> <ul style="list-style-type: none"> ◆ Unit-Specific Operating Record ◆ A description and the quantity of each dangerous waste received or managed. ◆ The method(s) and date(s) of any treatment or storage of dangerous waste. ◆ The location of each dangerous waste, and the quantity at each location. ◆ Records and results of waste analysis and trial tests required by WAC 173-303-300. ◆ Summary reports and details of all incidents that require implementing the contingency plan, as specified in WAC 173-303-360(2)(k). ◆ Records of monitoring, testing, or analytical data, and corrective action where required by WAC 173-303-630 through 173-303-695 and 40 CFR sections 264.1034© through (f), 264.1035, 264.1063(d) through (I), and 264.1064. ◆ Copies of notices to generators informing them that the facility has all appropriate permits as required by WAC 173-303-290, Required Notices. ◆ A copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator under 40 CFR 268.7 or 268.8. 	
106.	Page 12-1 – Add a section addressing the record keeping requirements specified in WAC 173-303-380(2)	
107.	Page 12-1 – Add a statement indicating the reports and record keeping, specific to the 222-S Laboratory Complex, will be immediately available upon request.	
108.	Page 12-1, lines 20 through 22 – Add unmanifested waste reports as specified in WAC 173-303-390(1) and identify applicable additional reports specified in WAC 173-303-390(3).	